

## **FISHERIES AND AQUATIC RESOURCES**

This report provides generally ample information for use in the EIR/EIS setting and impacts sections. It does not, however, include any mitigation measures. The report does not strictly adhere to the outline. Some additional setting information is necessary for zooplankton, American Shad, mysid shrimp and Delta Smelt. Significance criteria are not defined in the significance criteria section. The impacts analysis should include some discussion regarding how impacts will be analyzed when an alternative is selected (when project level is reached). Impacts to endangered species should be added to tables. Impacts are not clearly differentiated from other text. A detailed summary of impacts table is needed. Mitigation measures should be addressed. Unavoidable impacts should be listed. The report suggests that additional flow data from modeling alternatives are needed to complete the analysis, which implies that the conclusions are preliminary.

# Conformance to Outline

## Fisheries and Aquatic Resources

### Affected Environment

- The Affected Environment section follows the 4/22 outline except that the regional discussions are not further subdivided into historical and current resource conditions subsections. The format of this report section does not conform with the format guide in that it uses a single rather than double column and heading levels do not match those in the guide. However, the organization is simple and comprehensible.

### Environmental Consequences

- The impacts report generally follows the 6/25 outline except that certain titles have been altered (e.g. "Impacts of the Alternative" has been placed before each region) and the analysis is not broken down in terms of the various program components, but rather in terms of specific issues relevant to fisheries (i.e., water quality, water surface level, and species interactions). As with the Affected Environment report, the format of this report section does not conform with the format guide.

**REVIEW COMMENTS**  
**CALFED BAY-DELTA PROGRAM PEIS TECHNICAL REPORTS**  
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***AFFECTED ENVIRONMENT***

<b>No.</b>	<b>Page/Para</b>	<b>Comment</b>
1	General	The body of the report provides an appropriately high level of detail consistent with a technical appendix that must support a relatively detailed and comprehensive impacts evaluation. The summary, which would presumably be written for inclusion in the PEIS, has not been included in the technical report.
2	General	The report does not have a Table of Contents, and the headings are not numbered. Although the organization of the report is relatively easy to understand, lack of heading numbering makes it easy to get lost in the text. Many of the graphics and tables are difficult to read due to font size, quality, or amount of detail.
1	5, last para; General comment	Citation needed for flow numbers. Check numbers for consistency with water resources reports and flag.  The same comment applies in general to many reports. Report writers should try to be aware of presenting data that may be presented in other PEIS technical reports, and confirm consistency with other resource area teams. Opportunities for or queries concerning internal (to PEIS) references should be flagged in the text using bold type in brackets, e.g., [is this figure used in any water resources technical report ?]. Use of internal references where possible will improve the cohesion of the PEIS, and reduce the volume of text.
2	5, last para	Define period used to represent historical conditions. In Figure 5 "historic" is defined as 1972-1993, which is defined as "Existing Conditions" in Figure 6. Explain in the text the rationale for using this period and these terms. It would be preferable to use these terms consistently in all technical reports. "Existing conditions" has a specific meaning in the PEIS. "Historic" may need to be defined each time it is used.
3	Figures 3, 4	Figure 3 (noted as "to be provided") is intended to contain information that will be presented in the Delta Hydrodynamics technical report and that may be included in the PEIS. Please contact Team 2 for this information and to maintain consistency between reports. If possible, reduce the amount of redundancy between reports by referencing the pertinent report. (see comment 1)
4	11, para 4	Figure 6 has already been referenced and refers to Feather River flows. This reference should probably be to another figure similar to Figure 6, which is missing from the report.
5	13+, "Selected Species"	An introductory paragraph is needed to list the selected species that will be discussed and to explain the rationale for "selecting" these species. It would also be useful to present a summary of the critical issues associated with these species, perhaps in tabular format.
6	14, para 3 & 4	Additional quantification of adult steelhead at Nimbus, and similar level of detail quantifying chinook salmon in SJR is needed.

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***ENVIRONMENTAL IMPACTS/ CONSEQUENCES***

No.	Page/Para	Comment
1	General	<p>This document, more than many others, depends on data being developed by other technical teams. Although the analysis presented in the report provides a very strong framework for refining the impacts analysis based on project-specific data as they are developed, the level of detail and specificity of the report is clearly affected by the lack of availability of those data. Many of those data are now available, in preliminary form, and should be incorporated in the next draft. Some of the comments that follow are directed toward that goal.</p>
1	General	<p>The impacts report contains some information that would be more appropriate to present in the affected environment report and reference in the impacts report. Editorial comments on the (attached) hard copy provide examples of material that should be deleted from the impacts report. The impacts report should rely on information presented in the affected environment to describe existing conditions.</p>
2	6, "Summary"	<p>The summary does not describe impacts of the No Action Alternative relative to existing conditions.</p> <p>Four adverse impacts are identified, as summarized in Table 3. These include habitat loss, reduced Sacramento River flow, Adult migration delay, and natural flow direction. Beneficial impacts are identified for six broad issues. The simplification represented in the table is useful, for focusing attention on broad concepts, but the level of detail should be greater to meet the needs of the PEIS.</p> <p>More detailed analysis is needed in two general areas, both of which lead to greater specificity in defining the significance of the impact. First, a more detailed description of the nature of the impacts is needed. This would potentially increase the number of impact categories in the first column of Table 3. Instead of the overly broad impact category of "habitat loss" for example, the impact should state which species is (are) affected, in which locations, at which times, etc. Mitigation measures, which may be species- or location-specific, should be identified for each impact. If the impact is defined too broadly, mitigation measures cannot be adequately defined and the reader may not have adequate information to be able to differentiate between alternatives.</p> <p>The other type of detail needed is quantitative. It is not clear from the table what level of habitat loss is deemed significant, or whether all of the significant adverse impacts to habitat are equivalent.</p> <p>The text of the summary identifies a higher level of detail than is presented in Table 3, but it is difficult to relate the impact description in the text to the impact category shown in the table. The text and the table should be better</p>

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		<p>synchronized.</p> <p>The level of detail presented in the summary and summary table should be sufficient to reflect the distinguishing issues identified and developed so carefully in the body of the report.</p>
3	Impact Significance Criteria	Significance criteria are not defined in this section. An explanation of where in the report these criteria are presented is needed.
4	27, last para	The problem of avoiding redundancy is handled well here, by making the reader aware that the discussion is designed to be progressive and not repetitive.
5	27+, "Environmental Impacts", General	<p>It is difficult to pick out the statement of impacts from within the text. It would be helpful to present a statement of each category of impact so that the nature and magnitude of the impact and its significance are clearly identifiable. The impact statement should be a decisive, conclusory statement that can be traced through logical development from the factual information presented in the affected environment and description of the alternatives. Mitigation measures should be identified, where possible, that could be implemented to reduce the impact.</p> <p>A summary table of impacts at the level of detail presented in the impacts analysis section (rather than the level of detail presented in the "Summary" section) should be presented. This table should present a range of impact levels between beneficial and significant. (A standard format is being developed by Calfed).</p>
6	28, para 4, and general	It is not clear from the discussion of significance criteria, how flow modeling results presented in the delta hydrodynamics analysis, for example, will influence the conclusions presented in this section. Although the types of changes in flow (and other factors) that would be considered beneficial are discussed in the "Assessment Methods" section, there should be an attempt to define the ranges that would be considered substantial.

Comments on Affected Environment Technical Report for Fisheries and Aquatic Resources, *second Edition*

Aquatic Ecosystem Conditions section

1. Very little of the information on the extent of existing<sup>5</sup> and historic resources are documented with references. Were these produced for this report or were they obtained from other sources?

Selected Species section

2. Paragraph headings under Factors Affecting Distribution and Abundance for each species, such as Life History, Flow, Fishing, Spawning Gravels, etc. should be changed and reorganized, where possible, to fit into the Actions and Effects Categories listed in Table 3. Summary of Beneficial and Significant Adverse Impacts of CALFED Alternatives 1,2 and 3 in the Environmental Impacts Technical Report for Fisheries and Aquatic Resources.
3. Page 15 – For the striped bass include a statement that it is an introduced species, when it was introduced, it's importance as a sport fish.
4. Page 18 – Include information on the effects that the striped bass has on native species from competition and predation.
5. Page 23 – On page 19 a mention is made of the importance of zooplankton to fry in the lower Delta. Shouldn't that reduced production of zooplankton be described somewhere here as a factor affecting Abundance and Distribution?
6. Page 26 – Same as comment 5 for sturgeon.
7. Page 27 – A description of the effects of competition on native species should be included here for American Shad, an introduced species.
8. Page 32 – Same as comment 5 for Delta Smelt.
9. Page 44 – How has loss of wetlands and shallow water affected the mysid shrimp. Doesn't the loss of nutrients impact phytoplankton and ultimately the mysid?

Environmental Impacts Technical Report, Fisheries and Aquatic Resources

1. Include a statement in the summary addressing how the impacts will be analyzed once an alternative is selected and described in detail. In other words describe how the environmental analysis will proceed from programmatic to project specific.
2. A summary of the unavoidable impacts and those that can be mitigated should be included in the Summary chapter.
3. Is there any mitigation measures that could be implemented to reduce the impacts? These should be summarized as well.
4. An analysis of cumulative impacts is needed.
5. Can different alternatives be chosen for different regions or will the same alternative be chosen for all regions? If different alternatives can be selected then Table 3 should list a summary for each region.
6. The paragraph summaries for each region should include an impact summary table for each alternative by region.
7. Table 3 should list endangered species impacted. Even if the overall impact is positive, a loss of individuals of the species is still considered significant and would require Endangered Species Act consultation. In this case species specific analysis would be appropriate.
8. The report needs paragraph numbering to make negotiating the report sections easier.